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EXPLANATION OF PLATES.

PLATE I.

FIGS. 1 to 13. Development of sporidia of *Fenestella amorphia*.

1. Formation of sporidiogenic layer.
- 2, 3, and 4. Primitive sporidia.
- 5-12. Stages in sporidial development.
13. Mature ascus and sporidia.

PLATE II.

FIGS. 14-17. Sporidial development of *Patellaria fenestrata*.

14. Formation of sporidiogenic layer.
- 15-16. Formation of primitive sporidia.
17. A nearly developed sporidium.
- 18-26 represent stages in development of spores of *Camarosporium subfenestratum*.

The scale applies to both plates.

NEW SPECIES OF FUNGI.

BY J. B. ELLIS AND B. T. GALLOWAY.

ÆCIDIIUM CREPIDICOLUM, *n. s.* On leaves of *Crepis acuminata*, Helena, Mont., June, 1889. Rev. F. D. Kelsey, No. 98. Amphigenous, small, clustered but not crowded, often subcircinate around a vacant space in the center, hemispheric and closed at first, soon open, peridium thin, white, margin narrowly reflexed, at length lacerate cleft nearly or quite to the base. Spores subglobose, 20-24 μ , varying to ovate and elliptical, 20-30 by 15-20 μ (smooth?) with a rather thick epispore. The leaf is slightly thickened in the affected spots. Clusters 2-3 millimeters in diameter, few on a leaf, or smaller (3-6 *æcidia* together) and then more numerous. Differs from *Æcidium crepidis*, Thüm. in having the *æcidia* mass deeply buried in the leaf. *Æcidium Rostruppii*, Thüm. has the *æcidia* larger, but possibly our plant may not be distinct from *Æcidium Barkhausiae*, Roum.

USTILAGO (SOROSPORIUM?) *BRUNKII*, *n. s.* In sheaths of *Andropogon argenteus*, destroying the inflorescence. College Station, Brazos County, Tex. H. S. Jennings. Inclosed in the sheaths without any distinct membranaceous covering. Spores globose or ovate, 10-18 μ , in diameter, often apiculate, olivaceous brown under the microscope, finally subopaque. Epispore smooth, thick (3-4 μ). The spores are partially agglutinated and hence are not as loosely pulverulent or dusty as in most species.

SOROSPORIUM ELLISII, Winter, var. *PROVINCIALIS*, *n. var.* In inflorescence of *Andropogon provincialis*. Saline County, Mo. (Demetrio), and Custer County, Nebr. (Webber). Differs from the original speci-

mens on *Andropogon Virginicus*, described by Dr. Winter in Bull. Torr. Club, X p. 7, and distributed in N. A. F., 1099, in its more regular-shaped spores, with a thicker epispore and its larger spore glomerules subglobose, 35–150 μ , or oblong, 100–200 by 75–80 μ . The cylindrical mass of spores, also with an elongated bundle of fibers (the remains of the enveloping sheath)², is inclosed in a light-colored membranaceous sack, which protrudes above, while in the typical form this sack is less distinct and is entirely concealed.

SOROSPORIUM EVERHARTII, *n. s.* In florets of *Andropogon Virginicus*. Newfield, N. J., October (N. A. F., 2265 b.). Glomerules compact, opaque, 50–120 μ , in diameter, globose or oblong, composed of 100–300, or more closely-compacted spores, which do not easily separate and vary from subhyaline to brown and from subglobose 8–10 μ in diameter to oblong, 10–12 by 8–10 μ , with a nearly smooth epispore of medium thickness. The tips of the glumes in the affected florets become bleached, and open in a bifid manner, the lobes more or less reflexed, allowing the subcylindrical mass of spores to protrude. This differs from *S. Ellisii*, Winter in its smaller spores, more compact glomerules, and in attacking single florets instead of involving the entire inflorescence.

DIDYMOSPHERIA DENUDATA, *n. s.* On bark of dry dead oak limbs from which the epidermis had fallen off. Newfield, N. J., March, 1889. Perithecia scattered, ovate, suberumpent, minute (one-quarter millimeter), with comparatively thick membranaceous walls, the erumpent apex (about one-third part) roughish, black, with a papilliform ostium. Asci cylindrical, about 50 by 7 μ , abruptly contracted below into a short stipe-like base. Sporidia 1-seriate, elliptical, 1-septate, brown, 6–7 by 4 μ . This differs from *D. cupula*, E. & E., in its perithecia not collapsing and smaller, and in its smaller sporidia and shorter asci. It is found on the upper exposed side of the limb which is usually more or less bleached.

OPHIONECTRIA EVERHARTII, *n. s.* On old *Diatrype stigma* and on the decaying bark of oak limbs. Newfield, N. J., January, 1889. Gregarious, Perithecia ovate-globose, about one-sixth millimeter in diameter; granular-pruinose, except the rather acutely papilliform ostium dull dirty-yellow. Asci oblong-cylindrical, 75–80 by 12–14 μ , with rather indistinct paraphyses. Sporidia crowded-biseriate, fusoid, yellowish-hyaline, nucleate becoming faintly multiseptate, straight while lying in the asci, curved when free, 35–50 μ long and 3–3½ μ thick in the middle, gradually tapering towards each end.

GLÆOSPORIUM PALUDOSUM, *n. s.* On leaves of *Peltandra Virginica*. Virginia, August, 1889. D. G. Fairchild; Wilmington, Del., October, 1889. A. Commons, No. 977. Spots amphigenous, orbicular, or elliptical, ½–1 centimeter in diameter or by confluence larger, dirty brown, subzonate; margin darker and subindefinite. Acervuli minute (65–75 μ), mostly erumpent above. Spores oblong, granular, 18–22 by 6–7 μ .

CERCOSPORA BRUNKII, *n. s.* On leaves of geranium (cult.). Brazos County, Tex., November, 1889. Prof. T. L. Brunk. Spots amphigenous, light-brownish or pale brick color, orbicular or oval, $\frac{3}{4}$ – $2\frac{1}{4}$ millimeters in diameter, with a narrow, slightly raised, and rather darker border, which is more prominent on the lower side of the leaf. Hyphæ amphigenous, but more abundant below; pale brown, 90–200 by 3–5 μ , subgeniculate, 2–5 septate, forming loose spreading tufts of 5–6 (rarely more). Conidia clavate-cylindrical, hyaline, multiseptate (5–20). 50–125 μ . long, 3–4 μ . thick (at the lower end). Differs from *C. geranii* in its darker hyphæ with more numerous septa, its larger multiseptate conidia and the raised border of the spots.

DENDRODOCHIUM SUBEFFUSUM, *n. s.* N. A. F. 394. On thallus of some foliaceous lichen on trunk of a pear tree. Farmington, N. Y., August, 1889. E. Brown, 134. Sporodochia subeffused, spreading over parts of thallus and apothecia, collected and condensed here and there into compact orange-red subapplanate masses about 1 millimeter in diameter. Basidia subulate, 25–35 by 2–3 μ , sparingly branched. Conidia terminal, solitary, subglobose to ovate and elliptical hyaline 1–2 nucleate, 5–8 by 4 $\frac{1}{2}$ –6 μ .

SCORIOMYCES ANDERSONI, *n. s.* Under a decaying log of *Pinus ponderosa*. Belt Mountains, Montana. Altitude 6,500 feet. September, 1889. F. W. Anderson. Forms a waxy-yellow porous mass, 4–12 centimeters long, 2–4 centimeters thick and 2–4 centimeters wide, with an irregularly lobed outline and uneven, colliculose surface; lying among the decaying wood and humus and resembling somewhat a mass of collapsed honeycomb. It is made up principally of loosely compacted globose spores, 35–55 μ in diameter and filled with coarse granular matter. Differs from *S. Cragini*, S. & E., in its more compact growth and larger spores. In *S. Cragini* they are only 18–20 μ in diameter.

NEW FUNGI.

BY J. B. ELLIS AND B. D. HALSTED.

PHYLLOSTICTA MOLLUGINIS, *n. s.* On *Mollugo verticillata*. New Brunswick, N. J., October, 1889. Perithecia amphigenous, scattered, black, prominent, 80–100 μ in diameter. Sporules oblong or elliptical-oblong, hyaline, 8–10 by 3–4 μ .

SEPTORIA RUDBECKIÆ, *n. s.* On leaves of *Rudbeckia laciniata*, northern New Jersey, September, 1889. Halsted. On *R. hirta*, Wilmington, Del., October, 1889. Commons, 1033. Spots conspicuous, of a weather-beaten or wood-colored brown, 2–4 millimeters in diameter, irregular, subangular in outline, with a definite darker border surrounded by a purplish stain. On *R. laciniata*, often one or two smaller white spots are included in the larger brown spots. On both hosts the spots are paler below. Perithecia epiphyllous, prominent, subacute, black, scat-